

Claims 1-3, 5-9, 11-16, and 18 are now pending in this application. Claims 1-3, 5-9, 11-16, and 18 stand rejected.

The objection to the drawings under 37 C.F.R. 1.83(a) is respectfully traversed. Submitted herewith is a Request for Approval of Drawing Changes. Specifically, Figures 4 and 5 have each been amended to delete references to numerals 100 and 200, and to each identify the fuel system interface with reference numeral 36. Upon approval of the drawing changes, Applicant will submit substitute formal drawings incorporating the above-noted change. No new matter has been added. For the reasons set forth above, Applicant respectfully requests the objection to the drawings be withdrawn.

The rejection of Claims 1-3, 5-9, 11-16, and 18 under 35 U.S.C. § 112, first paragraph, is respectfully traversed. Applicant respectfully submits that one of ordinary skill in the art, after reading the specification in view of the Figures, would agree that the subject matter in the specification is described in such a manner as to reasonably convey that the Applicant had possession of the claimed invention, at the time the application was filed. Furthermore, Applicant submits that the specification as filed, does support a fuel system interface which receives electrically originated over-speed signals. More specifically, the components described in the specification and illustrated in Figure 2 are the same identical components described and illustrated in Figures 4 and 5, with the only difference between Figures 2, 4, and 5 being which speed sensing system is illustrated and described within each respective Figure. More specifically, the specification has been amended to recite that Figure 2 illustrates the fuel system interface receiving a electrically-originated overspeed signal, Figure 4 illustrates the fuel system interface receiving a mechanically-originated overspeed signal; and that Figure 5 illustrates the fuel system interface receiving a hydraulically-originated overspeed signal. Accordingly, Applicant respectfully submits that one of ordinary skill in the art, after reading the specification in light of the Figures, would understand the present invention as recited in Claims 1-3, 5-9, 11-16, and 18. For at least the reasons set forth above, Applicant requests the Section 112, first paragraph, rejections of Claims 1-3, 5-9, 11-16, and 18 be withdrawn.

The rejection of Claims 1-3, 5-9, 11-16, and 18 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Applicant respectfully submits that one of ordinary skill in the art, after reading the specification in view of the Figures, would understand the claimed recitation of coupling the fuel system interface shutoff shuttle valve to the fuel system based

on pre-defined priority selection logic, wherein the logic relates a plurality of different gas turbine engine operating conditions to the overspeed signals, and provides that when said fuel system interface is activated, as a result of receiving an over-speed indication, fuel flow is only initiated when each over-speed signal is removed. For example, Applicant submits that an artisan of ordinary skill in the art would understand controlling operation based on pre-defined priority logic, such as the exemplary priority logic illustrated and described in Figure 3, which illustrates a relationship between a list of operating signals and a list of other engine operating conditions. Furthermore, at page 6, lines 7-13, for example, the specification describes the interaction between the priority logic table and the fuel system interface, including how the priority and selection are determined. For at least the reasons set forth above, Applicant requests the Section 112, second paragraph, rejections of Claims 1-3, 5-9, 11-16, and 18 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited

Respectfully Submitted,

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Linebrink

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Serial No.: 09/687,886

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Filed: October 13, 2000

For: METHODS AND APPARATUS FOR ROTOR
OVER-SPEED PROTECTION

AMENDMENT AFTER FINAL

Commissioner for Patents
Box AF
Washington, D.C. 20231

Sir:

Submitted herewith are marked up Claims in accordance with 37 C.F.R. Section 1.121(c)(1)(ii).

IN THE CLAIMS

1. (twice amended) A method for assembling a gas turbine engine to prevent rotor over-speeding, said method comprising the steps of:

coupling a fuel system interface including a shutoff shuttle valve to the gas turbine engine such that the fuel system interface receives at least one of electrically and mechanically originated over-speed signals inputted from the engine; and

coupling the fuel system interface shutoff shuttle valve to the fuel system to stop engine fuel flow in response to the over-speed signals received, and based on pre-defined priority selection logic that relates a plurality of different gas turbine engine operating conditions to the overspeed signals and provides that when the fuel system interface is activated, as a result of receiving an over-speed indication, fuel flow is only initiated when each over-speed signal is removed.

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6. (twice amended) A fuel system interface for a gas turbine engine including a rotor, said interface coupled to the gas turbine engine to receive electrically [and mechanically] originated over-speed signals from the engine, said interface comprising a shutoff shuttle valve for stopping engine fuel flow in response to the over-speed signals received, and based on pre-defined priority selection logic to prevent the rotor from over-speeding, wherein said priority selection logic relates a plurality of different gas turbine engine operating conditions to the overspeed signals, and provides that when said fuel system interface is activated, as a result of receiving an over-speed indication, fuel flow is only initiated when each over-speed signal is removed.

13. (twice amended) A gas turbine engine comprising:

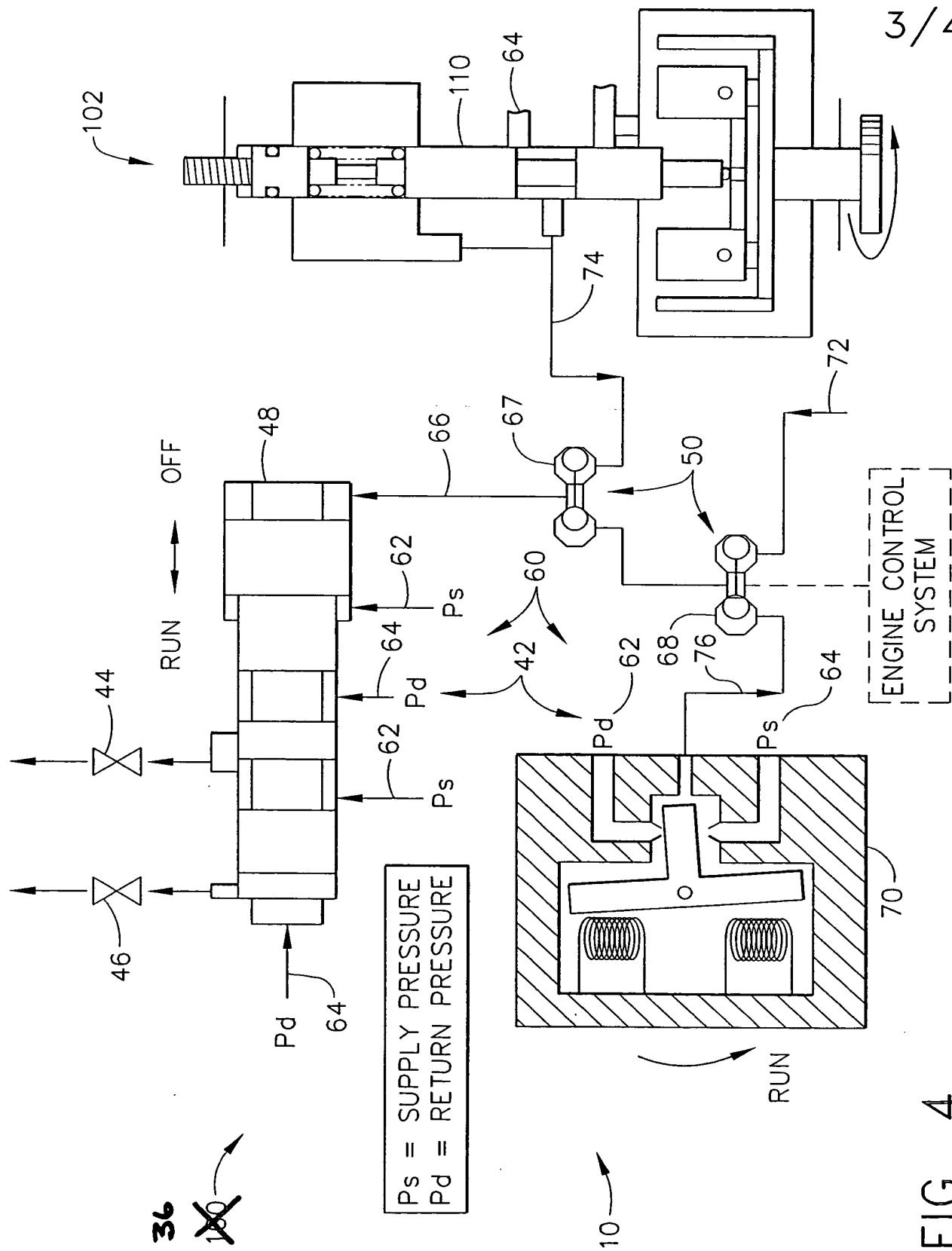
a rotor;

a fuel delivery system configured to supply fuel to said engine for operating said rotor; and

a fuel system interface coupled to said fuel delivery system to receive [a plurality of electrically and] mechanically originated over-speed signals from the engine, said interface comprising a shutoff shuttle valve for stopping engine fuel flow in response to the over-speed signals received, and based on pre-defined priority selection logic to prevent said rotor from over-speeding, wherein said priority selection logic relates a plurality of different gas turbine engine operating conditions to the overspeed signals, and provides that when said fuel system interface is activated, as a result of receiving an over-speed indication, fuel flow is only initiated when each over-speed signal is removed.

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